

Remarks

The Office Action dated January 12, 2006 has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1-7, 9-19, and 21-24 are pending in the Application. Claims 8 and 20 have been cancelled. No new claims have been added. Claims 1-7, 9-19, and 21-24 stand rejected.

The rejection of claims 4 and 16 under 35 U.S.C. § 112, second paragraph, is respectfully traversed.

The claims have been amended to overcome the issues noted in the Office Action and are now believed to satisfy § 112, second paragraph. Specifically, Claim 4 has been amended to recite "steering an electron beam to illuminate two focal spots of a cathode of the x-ray tube." Claim 16 has been amended to recite "said apparatus is configured to steer an electron beam of the x-ray tube to illuminate two different focal spots of a single cathode." For the reasons set forth above, Applicants respectfully request that the Section 112, second paragraph, rejection of Claims 4 and 16 be withdrawn.

The rejection of Claims 1, 3, 6, 7, 13, 15, 18, and 19 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,963,631 ("Brunnett") is respectfully traversed.

Brunnett describes a computed tomography (CT) imaging apparatus that includes a switching circuit 40 to provide dynamic axial detector interlacing in the axial- or Z-direction. The dynamic axial detector interlacing is combined with interlacing in the X-direction to satisfy the Nyquist sampling criterion in both the X- and Z-directions. Interlacing in the X-direction is obtained using an x-ray source 14 with a dynamic focal spot in which the focal spot is alternated or wobbled between two selected positions in the X-direction in successive DAS measurements to interleave samples. Using, dynamic focal spot interlacing in the X-direction and dynamic axial detector interlacing in the Z-direction, the sampling data is rebinned, averaged, or otherwise processed to obtain two-dimensional projection views that are spatially uniform and evenly distributed. Similarly to the effect of the dynamic focal spot wobbling, the dynamic detector interlacing in the axial- or Z-direction produces a spatial offset in the Z-coordinate for temporally adjacent original views. Accordingly, Brunnett

describes interlacing in the X-direction is obtained using an x-ray source with a dynamic focal spot in which the focal spot is alternated or wobbled between two selected positions in the X-direction and that dynamic axial detector interlacing in the axial or Z-direction is provided by a switching circuit, not by a wobble in the focal spot of the x-ray source.

By contrast, Claim 1 recites a method for scanning an object to reduce image degradation wherein the method includes “scanning the object in a helical mode using a multi-slice CT imaging system having a plurality of detector arrays arranged along a z-axis direction and a radiation source having a beam focal spot...controlling a wobble of the focal spot of the radiation source in the z-axis direction during said scanning to selectively preferentially illuminate individual said detector arrays through the scanned object for each view...collecting data from each said detector array for each view only when the detector array from which data is being collected is selectively illuminated.”

Brunnett does not describe nor suggest a method for scanning an object as is recited in Claim 1. Specifically, Brunnett does not describe nor suggest a plurality of detector arrays arranged along a z-axis direction. Rather, in contrast to the present invention, Brunnett describes a single two-dimensional array of detectors wherein each detector is divided into two sub-detectors along an axial direction (z) and a high-speed switching circuit that combines selected adjacent sub-detector outputs, for example, combining a sub-detector n alternately with sub-detectors (n-1) and (n+1) to produce interlaced DAS output signals along the axial direction (z). Moreover, Brunnett does not describe nor suggest controlling a wobble of the focal spot of the radiation source in the z-axis direction during said scanning to selectively preferentially illuminate individual said detector arrays through the scanned object for each view. Rather, in contrast to the present invention, Brunnett describes a dynamic focal spot in which the focal spot is alternated or wobbled between two selected positions in the X-direction and that a switching circuit provides dynamic axial detector interlacing in the axial or Z-direction. For at least these reasons, it is submitted that Claims 1 is patentable over Brunnett.

Claims 3, 6, and 7 are directly or indirectly dependent upon Claim 1. When the recitations of Claims 3, 6, and 7 are considered in combination with the recitations of Claim 1, it is submitted that Claims 3, 6, and 7 are likewise patentable over Brunnett.

Claim 13 recites a CT imaging apparatus including “a radiation source on a rotating gantry having a beam focal spot...a plurality of detector arrays arranged along a z-axis and configured to detect radiation from said radiation source passing through an object to be imaged...said CT imaging apparatus configured to...scan an object in a helical mode...control a wobble of the focal spot of the radiation source in the z-axis direction during said scanning to selectively preferentially illuminate individual said detector arrays through the scanned object for each view...collect data from each said detector array for each view only when the detector array from which data is being collected is selectively illuminated.

Brunnett does not describe nor suggest a method for scanning an object as is recited in Claim 13. Specifically, Brunnett does not describe nor suggest a plurality of detector arrays arranged along a z-axis direction. Rather, in contrast to the present invention, Brunnett describes a single two-dimensional array of detectors wherein each detector is divided into two sub-detectors along an axial direction (z) and a high-speed switching circuit that combines selected adjacent sub-detector outputs, for example, combining a sub-detector n alternately with sub-detectors (n-1) and (n+1) to produce interlaced DAS output signals along the axial direction (z). Moreover, Brunnett does not describe nor suggest controlling a wobble of the focal spot of the radiation source in the z-axis direction during said scanning to selectively preferentially illuminate individual said detector arrays through the scanned object for each view. Rather, in contrast to the present invention, Brunnett describes a dynamic focal spot in which the focal spot is alternated or wobbled between two selected positions in the X-direction and that a switching circuit provides dynamic axial detector interlacing in the axial or Z-direction. For at least these reasons, it is submitted that Claims 1 is patentable over Brunnett.

Claims 15, 18, and 19 are directly or indirectly dependent upon Claim 13. When the recitations of Claims 15, 18, and 19 are considered in combination with the recitations of Claim 13, it is submitted that Claims 15, 18, and 19 are likewise patentable over Brunnett.

For the above reasons it is requested that that the rejection of Claims 1, 3, 6, 7, 13, 15, 18, and 19 under 35 U.S.C. 102(e) as being anticipated by anticipated by Brunnett be withdrawn.

The rejection of Claims 9, 11, 12, 21, 23, and 24 under 35 U.S.C. 103(a) as being unpatentable over Brunnett in view of U.S. Patent No. 6,067,342 (“Gordon”) is respectfully traversed.

Brunnett is as described above. Gordon describes a digital filmless X-ray projection imaging systems and methods having resolution and dynamic range characteristics comparable to or greater than extant photographic film-based imaging systems that includes a pulsed radiation source that provides a pulsed x-ray beam. Column 6, lines 58-59. However, there is no teaching or suggestion as to how one would incorporate this pulsed source into the apparatus of Brunnett or use the teachings of Gordon to avoid errors due to readings taken during the wobble of the beam, much less to control the wobble of the radiation source in the z-direction, or to pulse the radiation source off when the focal spot is wobbled. Thus, Gordon adds nothing to Brunnett to teach or suggest either “controlling a wobble of wobbling the focal spot of the radiation source in the z-axis direction during said scanning to selectively preferentially illuminate individual said detector arrays through the scanned object for each view” or “pulsing the radiation source so that the radiation source is off when the focal spot is wobbled between positions in which individual said detector arrays are selectively preferentially illuminated.” Accordingly Applicants respectfully submit, Claims 9 and 21 are patentable over Brunnett in view of Gordon.

Claims 11 and 12, and 23 and 24 depend upon Claims 9 and 21, respectively. When the recitations of Claims 11 and 12, and 23 and 24 are considered in combination with Claims 9 and 21, respectively, it is submitted that Claims 11 and 12, and 23 and 24 are likewise patentable over Brunnett in view of Gordon.

For the above reasons, it is requested that the rejection of Claims 8, 10, 20, and 22 under 35 U.S.C. 103(a) as being unpatentable over Brunnett in view of Gordon be withdrawn.

The rejection of Claims 4 and 16 under 35 U.S.C. 103(a) as being unpatentable over Brunnett in view of U.S. Patent No. 6,980,623 (“Dunham”) is respectfully traversed.

Brunnett is as described above. Dunham describes a system and a method for adjusting a focal spot position during a scan of a computed tomography (CT) imaging system having a z-axis. The CT imaging system includes a detector array having a plurality of detector elements and an x-ray tube configured to direct an x-ray beam towards the detector

through an object to be imaged. The method includes turning on the x-ray tube and reading a z-ratio from the detector. A shift in a position of a focal spot of the x-ray tube is then determined utilizing the read z-ratio. The method further includes using a transfer function to determine a compensating electronic deflection value; and applying the electronic deflection value to the x-ray tube as at least one of a deflection voltage or a deflection current to track the focal spot in the z-axis direction.

Applicants respectfully submit that the Section 103 rejection of presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to combine Dunham with Brunnett. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant.” In re Kotzab, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, as is well established, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 221 U.S.P.Q.2d 1125 (Fed. Cir. 1984). Furthermore, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, “it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicant’s disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s

disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown.

Accordingly, since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection of Claims 4 and 16 be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that Dunham teaches away from the present invention and from Brunnett, and as such, thus supports the nonobviousness of the present invention. More specifically, in contrast to the present invention, Brunnett and Dunham clearly describes a CT imaging system that includes only a single detector array having a plurality of detector elements. As such, the presently pending claims are patentably distinguishable from the cited combination.

In addition, no combination of Brunnett and Dunham describes or suggests the claimed invention. Specifically, no combination of Brunnett and Dunham describes nor suggests controlling a wobble of the focal spot of the radiation source in the z-axis direction during scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view. Moreover, no combination of Brunnett and Dunham describes nor suggests collecting data from each detector array for each view only when the detector array from which data is being collected is selectively illuminated.

Accordingly, for at least the reasons set forth above, Claims 1 and 13 are submitted to be patentable over Brunnett in view of Dunham.

Claims 4 and 16 depend from independent Claims 1 and 13 respectively. When the recitations of Claims 4 and 16 are considered in combination with the recitations of Claims 1

and 13, Applicants submit that dependent Claims 4 and 16 likewise are patentable over Brunnett in view of Dunham.

The rejection of Claims 5 and 17 under 35 U.S.C. 103(a) as being unpatentable over Brunnett in view of U.S. Patent Application No. 20050100132 ("Block") is respectfully traversed.

Brunnett is described above. Block describes an anode assembly having multiple target electrodes that each receives electrons emitted by multiple cathodes such that each target electrode operates as an x-ray source. The multiple cathodes are controlled such that a particular cathode does not fire until each other cathode is sequentially fired. Block also describes that the electrode target tracks may be spatially separated along the x- or patient width axis which supports implementation of the x-ray tube assembly in a "wobble" mode to improve spatial resolution. However, Block does not describe an x-ray tube assembly that supports wobble in a z axis direction.

Applicants respectfully submit that the Section 103 rejection of presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to combine Block with Brunnett. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, "to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant." In re Kotzab, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, as is well established, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 221 U.S.P.Q.2d 1125 (Fed. Cir. 1984). Furthermore, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to

pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, “it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicant’s disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown.

Accordingly, since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection of Claims 5 and 17 be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that Block teaches away from the present invention and from Brunnett, and as such, thus supports the nonobviousness of the present invention. More specifically, in contrast to the present invention and to Brunnett, Block clearly describes a CT imaging system includes electrode target tracks spatially separated along the x- or patient width axis which supports implementation of the x-ray tube assembly in a “wobble” mode to improve spatial resolution. As such, the presently pending claims are patentably distinguishable from the cited combination.

In addition, no combination of Brunnett and Block describes or suggests the claimed invention. Specifically, no combination of Brunnett and Block describes nor suggests controlling a wobble of the focal spot of the radiation source in the z-axis direction during

scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view. Moreover, no combination of Brunnett and Block describes nor suggests collecting data from each detector array for each view only when the detector array from which data is being collected is selectively illuminated.

Accordingly, for at least the reasons set forth above, Claims 1 and 13 are submitted to be patentable over Brunnett in view of Block.

Claims 5 and 17 depend from independent Claims 1 and 13 respectively. When the recitations of Claims 5 and 17 are considered in combination with the recitations of Claims 1 and 13, Applicants submit that dependent Claims 5 and 17 likewise are patentable over Brunnett in view of Block.

The rejection of Claims 2 and 14 under 35 U.S.C. 103(a) as being unpatentable over Brunnett in view of U.S. Patent No. 5,224,136 ("Toth") is respectfully traversed.

Brunnett is described above. Toth describes a CT scanner that includes a collimator 38 having an entrance aperture 43 and an exit aperture 45. The z-axis position of the exit aperture 45 of the collimator 38 may be adjusted so that the fan beam 22, as indicated by fan beam axis 23, diverges from the gantry plane 60 in the z-axis dimension during the acquisition of the first projection of a projection set. The amount of divergence of the fan beam axis 23 from the gantry plane 60 is such that a volume element 7 at position 80 within a slice and moving toward the gantry plane 60 with motion of table 17, is intersected by the fan beam axis 23. The collimator 38 as controlled by the collimator controller 64 is coordinated by computer 70 with the position of table 17 so that during the movement of the table 17 and imaged object 12, the fan beam axis 23 is swept as to constantly intercept volume element 7. Accordingly, Toth describes that the pre-patient collimator 38 is positioned such that the fan beam position tracks the position of the patient during a helical scan, rather than controlling a wobble of the focal spot of the radiation source in the z-axis direction during scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view.

Applicants respectfully submit that the Section 103 rejection of presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to combine Toth with

Brunnett. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant.” In re Kotzab, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, as is well established, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 221 U.S.P.Q.2d 1125 (Fed. Cir. 1984). Furthermore, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, “it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicant’s disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown.

Accordingly, since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection of Claims 2 and 14 be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that Toth teaches away from the present invention and from Brunnett, and as such, thus supports the nonobviousness of the present invention. More specifically, in contrast to the present invention and to Brunnett, Toth clearly describes a CT imaging system that includes a collimator controlled with the position of a patient table so that during the movement of the table and the patient, the fan beam axis is swept so as to constantly intercept a particular volume element of the patient. As such, the presently pending claims are patentably distinguishable from the cited combination.

In addition, no combination of Brunnett and Toth describes or suggests the claimed invention. Specifically, no combination of Brunnett and Toth describes nor suggests controlling a wobble of the focal spot of the radiation source in the z-axis direction during scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view. Moreover, no combination of Brunnett and Toth describes nor suggests collecting data from each detector array for each view only when the detector array from which data is being collected is selectively illuminated.

Accordingly, for at least the reasons set forth above, Claims 1 and 13 are submitted to be patentable over Brunnett in view of Toth.

Claims 2 and 14 depend from independent Claims 1 and 13 respectively. When the recitations of Claims 2 and 14 are considered in combination with the recitations of Claims 1 and 13, Applicants submit that dependent Claims 2 and 14 likewise are patentable over Brunnett in view of Toth.

The rejection of Claims 10 and 22 under 35 U.S.C. 103(a) as being unpatentable over Brunnett as modified by Gordon and further in view of U.S. Patent No. 5,224,136 (“Toth”) is respectfully traversed.

Brunnett, Gordon, and Toth are described above. Toth describes a CT scanner that includes a collimator 38 having an entrance aperture 43 and an exit aperture 45. The z-axis position of the exit aperture 45 of the collimator 38 may be adjusted so that the fan beam 22, as indicated by fan beam axis 23, diverges from the gantry plane 60 in the z-axis dimension during the acquisition of the first projection of a projection set. The amount of divergence of the fan beam axis 23 from the gantry plane 60 is such that a volume element 7 at position 80 within a slice and moving toward the gantry plane 60 with motion of table 17, is intersected by the fan beam axis 23. The collimator 38 as controlled by the collimator controller 64 is coordinated by computer 70 with the position of table 17 so that during the movement of the table 17 and imaged object 12, the fan beam axis 23 is swept as to constantly intercept volume element 7. Accordingly, Toth describes that the pre-patient collimator 38 is positioned such that the fan beam position tracks the position of the patient during a helical scan, rather than controlling a wobble of the focal spot of the radiation source in the z-axis direction during scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view.

Applicants respectfully submit that the Section 103 rejection of presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to combine Toth with Brunnett as modified by Gordon. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant.” In re Kotzab, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, as is well established, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 221 U.S.P.Q.2d 1125 (Fed. Cir. 1984). Furthermore, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to

pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, “it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicant’s disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown.

Accordingly, since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection of Claims 10 and 22 be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that Burnett, Gordon and Toth teach away from the present invention, and as such, thus supports the nonobviousness of the present invention. More specifically, in contrast to the present invention Brunnett describes a computed tomography (CT) imaging apparatus that includes a switching circuit 40 to provide dynamic axial detector interlacing in the axial- or Z-direction, Toth describes Toth describes a pre-patient collimator positioned such that the fan beam position tracks the position of the patient during a helical scan, and Gordon describes a digital filmless X-ray projection imaging system that includes a pulsed radiation source that merely provides a pulsed x-ray beam. As such, the presently pending claims are patentably distinguishable from the cited combination.

In addition, no combination of Brunnett and Toth describes or suggests the claimed invention. Specifically, no combination of Brunnett and Toth describes nor suggests controlling a wobble of the focal spot of the radiation source in the z-axis direction during scanning to selectively preferentially illuminate individual detector arrays through the scanned object for each view. Moreover, no combination of Brunnett and Toth describes nor suggests collecting data from each detector array for each view only when the detector array from which data is being collected is selectively illuminated.

Accordingly, for at least the reasons set forth above, Claims 9 and 21 are submitted to be patentable over Brunnett in view of Toth.

Claims 10 and 22 depend from independent Claims 9 and 21 respectively. When the recitations of Claims 10 and 22 are considered in combination with the recitations of Claims 9 and 21, Applicants submit that dependent Claims 10 and 22 likewise are patentable over Brunnett as modified by Gordon and further in view of Toth.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



William J. Zychlewicz
Registration No. 51,366
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070